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MOLD RUNNER REMOVALFROM A SUBSTRATE-BASED PACKAGED ELECTRONIC DEVICE

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ABSTRACT

10 According to the invention, an electronic device mounted on a substrate is encapsulated using a standard two-piece mold. A novel degating region is formed on a surface of the substrate to allow removal of excess encapsulant formed on the surface during molding
15 without damaging the remainder of the device. The material of the degating region that contacts the encapsulant forms a weak bond with the encapsulant, relative to the bond formed between the encapsulant and the substrate, so that the encapsulant can be peeled
20 away from the degating region without damaging the substrate or other portion of the device. The degating region is provided without introducing additional steps into the process for forming the device. The presence of the degating region eliminates the necessity of
25 using a three-piece or modified two-piece mold to achieve top gating in order to degate without damaging the device. In one embodiment, the degating region is made of gold. Gold has an adhesive force with typical encapsulant materials that is approximately 10% of the
30 adhesive force between the typical encapsulant materials and typical substrate materials.

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